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A HAIR CONDITIONING AGENT, IN PARTICULAR TO OPTIMIZE HAIRCUTTING

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The invention concerns a hair conditioning agent, in particular to make haircutting easier, which is uniformly distributed in the hair before a haircut and which contains 0.01 to 2 wt% L-cysteine, 0.01 to 3 wt% panthenol, 0.01 to 2 wt% polyquaternium 10 and 0.01 to 3 wt% cetyltrimethylammonium chloride, in each case with respect to the total composition of the agent.

The pH of the agent lies in the acid pH range.

The agent clearly makes the cutting of hair easier, and in this way enables more precise haircuts. It acts to prevent flyaway and tangling of hair. After the haircut has been completed and the hair has been dried, it brings about stability of the hair style.

This invention concerns hair conditioning agents and a method by which haircuts in particular can be carried out in an optimum way.

Various haircutting practices are employed:

- A) the hair is cut dry;
- B) the hair is wetted beforehand with water, which is commonly lightly scented, and then cut;
- C) the hair is washed, rinsed, lightly toweled and then cut.

After the haircut, the hair is styled. Commonly used hair setting preparations and blow dryers are used as styling aids.

Cutting dry hair frequently turns out to be quite difficult. Human hair has considerable strength because of its content of cysteine, disulfide bridges, salt compounds and hydrogen bridges. The haircutting process is made more difficult because of this resistant macromolecular structure.

If the hair is wetted with water beforehand, the hair swells and, accordingly, the hair strength is somewhat reduced. In this way, cutting the hair is made slightly easier. However, the described resistance, dryness and brittleness reappear after the hair has been dried.

A similar effect arises in the case of prewashing, rinsing and towel-drying the hair. However, since oily layers are removed from the hair by the washing agent, increased hair dryness and brittleness is brought about.

For this reason, there was the task of developing an agent that optimizes the cutting of hair or, in other words, makes the hair more susceptible to cutting. In addition, after the hair has been cut and dried, the agent should counteract hair flyaway, dryness and brittleness.

Surprisingly, it was found that a formulation containing about 0.01 to 2, preferably about 0.1 to 1 wt% L-cysteine, about 0.01 to 3, preferably about 0.1 to 2 wt% panthenol, about 0.01 to 2, preferably about 0.1 to 1 wt% polyquaternium 10 and about 0.01 to 3, preferably about 0.1 to 2 wt% cetyltrimethylammonium chloride, in each case with respect to the total composition of the agent, when applied to the hair before the beginning of a haircut, makes the cutting of the hair clearly easier or, in other words, the hair becomes extremely cuttable.

The preferred pH range of the agent lies between 4.5 and 6.5.

The neat hairstyles that are desired result from the use of the agent in accordance with the invention or from the ease of cutting of hair that it produces. After the hair has been cut, it remains in the desired form in that the bridges in the hair that are slightly loosened by L-cysteine are reconsolidated in this form by oxidation by oxygen from the air. In addition, the hair has excellent combability after using the agent. Accordingly, the agent also counteracts hair tangling and hair flyaway as well as hair brittleness.

The following examples are intended to illustrate the object of the invention without limiting it.

Example 1

| | |
|--------|--------------------------------------|
| 0.66 g | L-cysteine hydrochloride monohydrate |
| 0.33 g | 25% ammonia solution |
| 0.30 g | polyquaternium 10 |
| 1.00 g | panthenol |

| | |
|----------------|---------------------------------|
| 0.25 g | cetyltrimethylammonium chloride |
| 0.40 g | perfume oil |
| 0.10 g | ascorbic acid |
| <u>96.96 g</u> | water |
| 100.00 g | |

The pH of the preparation is 5.5.

The preparation is homogeneously distributed on dry or washed, towel-dried hair before the beginning of the haircut. The hair can be easily combed and cut.

Example 2

| | |
|----------------|---|
| 2.00 g | L-cysteine hydrochloride monohydrate |
| 1.00 g | aqueous ammonia solution containing 25% ammonia |
| 0.60 g | polyquaternium 10 |
| 2.00 g | panthenol |
| 0.50 g | cetyltrimethylammonium chloride |
| 0.30 g | perfume oil |
| 0.05 g | ascorbic acid |
| 0.05 g | citric acid |
| <u>93.50 g</u> | water |
| 100.00 g | |

The preparation has a pH value of 5.5.

After uniform distribution of the preparation in the hair to be cut, the haircut can be carried out in a consistent fashion. Then, after the haircut, the preparation remains on the hair. It produces a styling stability and excellent combability even in dry hair.

Claims

1. A hair conditioning agent, in particular to optimize the cutting of hair, which is characterized by the fact that it
 - a) is uniformly distributed in the hair before the beginning of cutting the hair and contains
 - b) 0.01-2 wt% L-cysteine and
 - c) 0.01-3 wt% panthenol
 - d) 0.01-2 wt% of the cellulose compounds with the CTFA name polyquaternium 10
 - e) 0.01-3 wt% cetyltrimethylammonium chloride,
 in each case with respect to the total composition of the agent, and the agent has

f) a pH value in the acid pH range.

2. An agent as in Claim 1, which is characterized by the fact that it contains 0.1 to 1 wt% L-cysteine.

3. An agent as in Claim 1 or 2, which is characterized by the fact that it contains 0.1 to 2 wt% panthenol.

4. An agent as in one or more of Claims 1 to 3, which is characterized by the fact that it contains 0.1 to 1 wt% polyquaternium 10.

5. An agent as in one or more of Claims 1 to 4, which is characterized by the fact that it contains 0.1 to 2 wt% cetyltrimethylammonium chloride.

6. An agent as in one or more of Claims 1 to 5, which is characterized by the fact that the pH value of the agent lies in the pH range from 4.5 to 6.5, and this pH value is established accordingly by means inorganic acids, like citric acid and/or ascorbic acid.

7. An agent as in one or more of Claims 1 to 6, which is characterized by the fact that the preparation remains in the hair, or is not immediately rinsed out after the haircut.

8. An agent as in one or more of Claims 1 to 7, which is characterized by the fact that other compounds, like fragrance components and/or proteins and/or surfactants, are contained in the agent.

9. An agent as in one or more of Claims 1 to 8, which is characterized by the fact that the preparation is combined with other hair conditioning agents.